

. YUGOSLAVIA/Nuclear Physics - Installations and Instruments.
Methods of Measurement and Research.

C-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 5143
Author : Debenec L. Kramer, V., Marsel, J., Vrscaj, V.
Inst : -
Title : Mass Spectrometric Measurements of UF₆
Orig Pub : Repts. LL J. Stefan 77 Inst., 1958, 5, 33-39

Abstract : A Nier-type 60° mass spectrometer with a resolution of 350 was used to measure the isotopic ratio U²³⁸/U²³⁵ when UF₆ is introduced into the instrument. The UF₆ can be introduced in a viscous stream through two capillaries, from vessels located in a thermostatic bath. One vessel contains UF₆ with natural contents of isotopes. The measurement of the isotopic ratio was carried out by comparing the intensity of the mass lines 330 and 383 in multiple magnetic or electric scanning. For exact measurements of small differences in the isotopic ratios of two specimens,

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. YUGOSLAVIA/Nuclear Physics - Installations and Instruments.
Methods of Measurement and Research.

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Abs Jour : Ref Zhur Fizika, No 3, 1960, 5143

use was made of the method of successive inlet of the samples. The "memory" effect of the instrument to old, previously admitted samples, was investigated. It is shown that in the case of a small difference in the isotopic ratios of the specimen, it is enough to stop the apparatus for two minutes for evacuation between measurements. It is established that the isotopic ratio U^{238}/U^{235} in natural uranium is 138.2 ± 0.4 . Ye.L. Frankevich

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- 14 -

VRSCAJ, V.; FURMAN, V.; DEKLEVA, J.

Nier's metallic mass spectrometer, p. 2. ELEKTROTEHNIŠKI VESTNIK.

(Institut za elektrisko gospodarstvo, Fakulteta za elektrotehniko in
Institut za elektroizvedbo) Ljubljana. Vol. 23, no. 11/12, 1955.

So. East European Accessions List Vol. 5, No. 9 September, 1956

VRSEAJ J.
CZECHOSLOVAKIA/Magnetism - Experimental Methods of Magnetism

F-1

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1126

Author : Vrseaj, Stane

Inst : -

Title : Stabilization of Magnetic Fields with the Aid of Nuclear Resonance.

Orig Pub : Repts "J. Stefan" Inst., 1955, 2, 101-105

Abstract : Description of an electromagnet and a device that stabilizes the field with the aid of magnetic nuclear resonance. The magnet (weighing 500 kg) produces a field intensity of 2500 -- 5400 gauss. The diameter of the pull pieces is 12 cm, the gap is 4 cm, the inhomogeneity in the field is 0.03 gauss-cm⁻¹. The transducer employed is a tuned circuit fed from a quartz-stabilized oscillator. The control signals are worked out by a synchronous detector and regulate the magnetic field with the aid of two pairs of additional coils, fed by the plate current of the control

Card 1/2

VRSEC, Ernest, ing.

The proposal for the standard on roughness of superficies. Automatika
2 no.3:177-178 Ag '61.

(Yugoslavia--Standardization)

KASPAR, Jiri, dr.; VRSECKY, Arnost, inz.

Methods of establishing and using the technical and economic indexes
of capital investment in the food industry. Prum potravin 13
no.6:286-289 Je '62.

1. Ministerstvo potravinarskeho prumyslu, Praha.

VRSECKY, A.

Evaluation of the economic efficiency of technical development and construction of buildings for bakeries under the investment plan. (To be contd.)
p. 45.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho prumyslu a vykupu zemedelskych vyrobku a Sdruzeni mlynu a pekaren)
Praha, Czechoslovakia, Vol. 5, no. 1, Jan. 1959.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2,
Feb. 1960

Uncl.

VRSECKY, A.

Evaluation of the economic efficiency of technical development and construction of buildings for bakeries under the investment plan. (To be contd.) p. 94.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho prumyslu a vykupu zemedelskych vyrobku a Sdruzeni mlynu a pekaren) Praha, Czechoslovakia, Vol. 5, no. 2, Feb. 1959.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2, Feb. 1960.

Uncl.

VRSECKY, F.

"Higher efficiency in breweries and malt kilns." P. 57.

KVASNY PRUMYSL. (Ministerstvo potravinarskeho prumyslu). Praha,
Czechoslovakia, Vol. 5, No. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8,
August 1959.
Uncla.

BENES, F., ins., CSc.; VRSEK, J., inz.; MAKARJEV, P., inz.;
OLEJ, J., inz.

Quality characteristics and structure of low-carbon steels
in continuous casting. Hut listy 18 no. 12:850-858 D: 61.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for all except
Olej).
2. Svermove zeleziarne, Podbrezova (for Olej).

VRSEK, J., inz.; BENES, F., inz., CSc.; SZABO, A., inz.; STENO, J., inz.

Problems of continuous casting of low-carbon steels. Hut
listy 18 no.11:773-779 N°63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for Vrsek and Benes)
2. Svermove zeleziarne, Podbrezova (for Szabo and Steno).

MYSLIVEC, Theodor; CADEK, Josef; MANDL, Miroslav; VRSEK, Jaroslav;
BRODSKY, I.; LUBOVSKY, M.

Effect of the quality of ceramic runners on the micropurity of steel used for making railway wagon tires. Part 2: Investigation on determining the origin of nonmetallic inclusions in steel by radioactive isotopes. Hut listy 16 no.2:94-102 F '61.

1. Vyzkumny ustav, Vitkovicke zelezarny Klementa Gottwalda, Ostrava (for Myslivec, Brodsky and Lubovsky). 2. Vyzkumny ustav hutnictvi zeleza, Praha (for Cadek, Mandl and Vrsek).

L 41178-65 EWT(d)/EWT(m)/EWP(w)/EWP(f)/EWP(c)/EWP(v)/EPR/T/EWP(k)/EWP(h)/EWP(l)/
EWA(c) 7f-4 7M
AM4048147 BOOK EXPOSITION 1/ Z/

Vrsinsky, Bohumir (Engineer); Hlatny, Jiri (Engineer)

Handbook for aircraft mechanic; piston engines (Prirucka leteckeheho motorare I; pistove motory) Prague, Nakl. dopravy a spoju, 1964. 379 p. illus., biblio. (fold. diags.) 2000 copies printed

TOPIC TAGS: aircraft engine, aircraft mechanic, aircraft piston engine

PURPOSE AND COVERAGE: The book is intended for mechanics and other shop personnel working in the production, testing, and operating of aircraft piston engines. The book describes the design, production, testing and operating of aircraft piston engines, and is intended to fill the gap between theoretical works on the one hand and work shop manuals on the other. The book is written at the level

TABLE OF CONTENTS [Abridged]:

Preface -- 5

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VRSOVSKY, E.

CZECH/1-59-10-11/37

AUTHOR: Lesák, J., Vojáček, E.
TITLE: Further Respond to the Gliding Section Challenge
(Další ohlas na výzvu plachtařské sekce)
PERIODICAL: Křídla Vlasti, 1959, Nr 10, lower part of p 7 (OSR)
AUTHOR: Article deals with the contributions towards the 4th
CPZ (National Glider Championship) fund drive by the
Liberec Regional Aeroclub, Hodkovice Aviation Station
and Podhořany Glider Tow Station.

Card 1/1

VRSCOVSKY, Pavel

Experimental photoconductive pickup electron tubes sensitive to X-rays. Sbor vak elektrotech 4:145-155 '64.

1. Research Institute of Vacuum Electrical Engineering, Prague.

WALL, R.; P. 1011, 1.

Hydro- and testing of impregnative tar oils. p. 177.

DRVNA INDUSTRIJA. (Institut za drveno-industrijska istraživanja)
Ljubljana, Jugoslavija. Vol. 9, no. 11/12, Nov./Dec. 1956

Monthly list of East European locations (LAW) IC, Vol. 8, no. 6,
June 1999 Incl.

Z/014/61/000/008/003/007
E192/E382

AUTHORS: Dušek, Dzeněk, Engineer and Vrtek, František,
Engineer

TITLE Influence of the Stray Magnetic Field of a Dynamic
Loudspeaker on Ferrite Antennae

PERIODICAL: Sdělovací technika, 1961, No. 8, pp. 290 - 291

TEXT: The results of an experimental investigation of the influence of a constant magnetic field on ferrite antennae are reported. Also, the stray magnetic fields of three dynamic loudspeakers having a diaphragm with a diameter of 200 mm and magnets of ALNI (type ARO 511), ALNICO (type ARO 533) and an anisotropic oriented ferrite were measured. Several types of ferrite antennae made from LHB (lithium-zinc-ferrite) with initial permeability $\mu_i \sim 50$ and N1B (nickel-zinc-ferrite) and N2 (also nickel-zinc-ferrite) with $\mu_i \sim 200$ were used in the investigation. The changes of the permeability of the antenna coil due to the constant magnetic field were measured at a frequency of 1 Mc/s by means of a Q-meter. The ferrite
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Influence of the Stray

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antenna with its coil was placed in the field of a magnetisation solenoid, where the field could be varied continuously between 0 and 100 Oe. The percentage permeability changes as a function of the applied magnetic field for the three types of ferrite are illustrated in Fig. 1. It is seen that the effect of the external magnetic field on the permeability is less pronounced in the antennae having higher initial permeability. The change of the permeability of the coil depends on the shape of the antenna, in particular, on the so-called demagnetisation factor, N of the antenna, which is proportional to the ratio l/d , where l is the length of the antenna and d is its diameter. The actual magnetic field acting on the antenna is defined by:

$$H = \frac{H^0}{1 + \frac{N}{4\pi\mu}} \quad (4)$$

where H^0 is the external magnetic field. If the data of Fig. 1 are re-plotted by taking N into account, it is found

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that the influence of the external field is the same for all three types of antenna. In practice, the source of the external field in a radio-receiver is the stray field of the dynamic loudspeaker. Such fields for the above three loudspeakers were measured by means of a permalloy probe containing two primary windings of 240 turns each and a secondary winding of 9 000 turns. The stray field for the ALNI magnet is illustrated in Fig. 5; this shows the lines of constant field in polar coordinates. The fields of the other two loudspeakers are similar in shape to that shown in Fig. 5. There are 7 figures and 2 references: 1 Czech and 1 non-Czech.

Card 3/4



DUSEK, Zdenek, inz.; VRTEK, Frantisek, inz. -

Influence of the magnetic dispersion field of dynamic
loudspeakers on ferrite antennas. Sdel tech 9 no.8:290-291
Ag '61.

VRTEK, FRANTISEK

CZECHOSLOVAKIA

Authors: DUKA, Zdenek, and VRTEK, Frantisek, eng.

Title: "The Influence of the Magnetic Dispersion Field of Dynamic Loudspeakers on Ferrite Antennas."

Source: Prague, Elektronika, Vol IX, No 8, 1961, pp 290-291.

Abstract: The size of the loop antenna is determined by the size of the radio. The smaller the radio, the lesser the sensitivity of the loop antenna. A ferrite antenna concentrates a magnetic field from a large surface. It is a question of what influence the DC magnetic field of dynamic loudspeakers will have on a ferrite antenna, made of zinc-nickel ferrites with relative permeability up to 200. The authors actually measured a dispersion field of three 200-millimeter diameter loudspeakers provided with magnets: Alni type AHO 51, Alnico type AHO 533, and oriented ferrite, by using permalloy probe up to a distance of 30 centimeters from the center of the loudspeakers. The primary winding of the probe is fed voltage from a generator at the frequency of one kilocycle. If the probe is in the zero magnetic field,

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CZECHOSLOVAKIA

Source: Prague, Elektroa. technika, Vol IX, No 6, 1961,
pp 290-291.

the voltage on the secondary winding is also zero. If it enters any magnetic field, the balance will change. And from the difference in the flows it is possible to find the field intensity permeability of the ferrite antenna, calibrated directly in oersteds.

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MALIK, J., ing. (Czechoslovakia); VITEK, J. ing. (Czechoslovakia)

Some considerations on power demand of iron metallurgical plants. Ipari energia 5 no.3:56-57 M '64.

VRTEL, J.

"Technology of nuclear reactors" by P. Ageron, A. Bonaldi, H. Gauzit and T. Reis. Vol. 1: "Materials". Reviewed by J. Vrtel. Jaderna energie 6 no.3:108 Mr '60.

VRTEL, Jaroslav

Problem of materials in increasing the operational capacity
of nuclear power plants. Jaderna energie 4 no.3:80-84
Mr '58.

1. Vyzkumny ustav materialu a technologie, Praha.

VRTEL, Jaroslav

Research on nuclear physics and engineering in Yugoslavia.
Jaderna energie 4 no.6:175 Je '58.

VRTELJ

19
Fuel elements, fuel-element cladding, and construction materials in a reactor. I. Fuel elements and fuel-element cladding. Jaroslav Pluhar and Jaroslav Vrdlik. Jaderná energie 5, 298-303(1960).--The following aspects are sur-

veyed: types of materials in solid fuel elements (metal, alloys, ceramics, cermets) and their mech., thermal, corrosion, and nuclear properties; cladding and jacket materials (Al, Mg, Zr, Be, Nb, V, their alloys, and special steels); construction details of the fuel element (rods, plates, or tubes), including surface ribs for gas-cooled reactors; and possibilities of fuel elements based on Pu.

H. Newcombe

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4E2C
1-4E2C
4E3C
2-4E3C
1-RS

VRTEL, J.

Distr: 4E3c 2 cys/4E3d/4E2b(v)

✓ Materials for reactor control rods. ✓ Jaroslav Vrtel
(State Research Inst. Materials and Technol., Prague).
Jaderná energie 6, 9-16 (1960).—The required properties for
control-rod materials include a high neutron absorption cross
section, low neutron scattering, high m.p., low wt. of sub-
stance needed to achieve a given absorption, high neutron
absorption of the product of the nuclear reaction of the
original material with neutrons, and low cost. The prop-
erties of Hf, Sm, Eu, Gd, Cd, alloys of Cd with Ag, In, or
Sn, and B used as B₄C or in alloys, are given. Stainless steel
contg. B was studied with regard to casting, malleability,
mech. strength, and radiation stability. Neutron absorp-
tion by B¹⁰ produces He, which forms blisters in B-Ti alloy,
but not in B steel.

H. Newcombe

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RAD

VRTEL, J.

Materials used in the construction of pressure tank of the reactor of
Experimental Nuclear Power Plant in Kahl, German Federal Republic.
Jaderna energie 7 no.8:280-281 Ag '61.

VRTEL, J.

Effect of neutron radiation on beryllium. Jaderna energie 7 no.12:
415-416 D '61.

WITTEL, J.; PRUNAN, J.

Fuel elements, cladding and reactor-construction materials. I. Fuel elements and cladding. (To be contd.) p. 226.

JAMSKERA ENERGET. (Ministerstvo energetiky)
Praha, Czechoslovakia Vol. 5, no. 7, Sept. 1959

Monthly List of East European Accession, (EEAI), LC, Vol. 8, No. 12, Dec. 1959
Uncl.

VRTEL, J.; PLUMER, J.

Fuel elements, fuel-element cladding and reactor-construction materials. II.
Reactor-construction materials. (To be contd.) p. 331.

JADERNA ENERGIE. (Ministerstvo energetiky)
Praha, Czechoslovakia Vol. 5, no. 10, Oct. 1959

Monthly List of East European accession, (ICAI), LG, Vol. 8, No. 12, Dec. 1959
Uncl.

VRTEL, J., inz. CSc.

Micromechanism of the brittle fracture of steel. Strojirenstvi
14 no.12:929-936 D '64.

1. State Research Institute of Material and Technology, Prague.

VRTEL, Milos

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: DVM

Affiliation: Department of Obstetrics and Gynecology, Veterinary Faculty (Porodnicko-gynekologicke katedra veterinarni fakulty) Brno; Head /prednosta/ Dr E. PRIBYL, Dr Sc

Sources: Prague, Veterinarstvi, Vol 11, No 10, Oct 1961; pp 381-385

Data: "Fertility in Small Ruminants"

KUTLAS, Eduard
VRTEL, Milos

GPO 981643

VRTELI, G.

Production and consumption. Problems econ 18 no.9:3-14
S '62.

VRTELI, G., candidat in stiinta economice

Process of the expanded reproduction during the stage of the completion of building socialism. Probleme econ 14 no.7:16-26 J1 '61.

CZECHOSLOVAKIA/Virology - Human and Animals Viruses.

E-3

Abs Jour : Ref Zhur - Biol., No 12, 1958, 52633

Author : Vrtiak, J., Frano, J., Belobrad, G.

Inst : -

Title : Isolation of Newcastle Disease Virus in Partridges and
Its Properties.

Orig Pub : Veterin. casop., 1957, 6, No 5, 353-362

Abstract : No abstract.

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YUGOSLAVIA/Microbiology - General Microbiology.

F

Abs Jour : Ref Zhur Biol., No 1, 1959, 618

Author : Vrtar, D.

Inst : -

Title : New Tannin Method for Obtaining Proteolytic Enzymes from Microorganisms.

Orig Pub : Glasnik biol. sek. Hrvatsko prirodsl. drustvo, 1953
(1955), Ser. 2B, 7, 374-375

Abstract : No abstract.

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- 4 -

VRTAS, B., LUETIC, P.

"Problems and experiments in the production of fumaric acid." p. 69. (KEMIJA I
INDUSTRIJI, Vol. 2, no. 3, 1953, Zagreb.)

SO: Monthly List of East European Accessions, Vol. 2, #3, Library of Congress
August, 1953, Uncl.

VRTAR, B., LIETTC, P.

"Problems and experiments of the production of fumaric acid." (To be conti.) p. 40.
(ZE IJA U INDUSTRIJI, Vol. 2, no. 2, 1953, Zagreb.)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress
August, 1953, Uncl.

VRTAR, Boris
Dimitro Vrtar

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U. 18 25 Jan 54

Microbiology

(2)

✓ The microbicidal action and the phenol coefficient of
d furfuryl alcohol. Boris Vrtar (Inst. ind. istraživanja,
Zagreb). *Kemija u Tehnologiji* (Zagreb) 2, 208-9 (1953).
—Results obtained with *Aspergillus*, *Penicillium*, *Sac-*
charomyces, and *Staphylococcus* supported on nutritive sub-
stances, showed a pronounced microbicidal power of fur-
furyl alc. Its disinfecting power tested with *S. aureus* and
Escherichia coli was 0.6-0.8 of that of phenol.
Nikola Plavčić

VETARIC, I.

Can the choice of freight cars for export shipments be simplified? p. 260. (BECBRAD, VOL 10, No. 7, July 1954.)

SO: Monthly Lists of East European Accessions. (EEAL, LC, Vol 4, No. 6, June 1955, Uncl.

VRTARIC, I.

Freer arrangement of cars will accelerate their turning. p. 336. (SECGRAPH, Vol. 10, No. 9, Sept. 1954.)

SO: Monthly List of East European Accessions. (EEAL, IC, Vol 4, No. 6, June 1955, Uncl.

VRTARIC, J

"Toward a uniform application of tariffs". (p. 41).
ZELEZNICE. (Jugoslovenske zeleznice) Beograd. Vol. 10, no. 2, Feb. 1954

SO: East European Accessions List. Vol. 3, No. 8, August 1954

ACC NR: AP6011971

SOURCE CODE: CZ/0057/65/000/003/0133/0135

AUTHOR: Vrtek, Jaromir (Engineer); Sobek, Jan

ORG: NHKG, Ostrava

TITLE: Experience in construction and during first years of operation of the oxygen plant at the Klement Gottwald Nova Hut Iron Works

SOURCE: Hutnik, no. 3, 1965, 133-135

TOPIC TAGS: furnace, krypton, xenon, oxygen

ABSTRACT: The oxygen is produced as technical-grade product, and used for increasing production rate in existing furnaces. A krypton concentrate plant is also in production, yielding a 40-80% Kr and Xe by volume. The oxygen plant is of Russian manufacture, and produces 4,700 m³/hof 95% O₂, 280 m³/hof 99.2% O₂, and 20 m³/hof a Kr - Xe concentrate with 0.1 to 0.2% of Kr and Xe. The compressors are of Brown-Boveri manufacture; units have a 32,000 Nm³/h capacity at 6.5 atp pressure. Start-up difficulties of the plant are discussed. Shortcomings of the design of the oxygen plant are described. Orig. art. has: 2 figures and 1 table. [JPRS]

SUB CODE: 13 / SUBM DATE: none

Steel Making 18

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L 20211-66 EPT(n)-2/EWP(v)/T/EWP(t)/EWP(k) - JPR(C) 32/11700
ACC NR: AP6010340 SOURCE CODE: CZ/0032/65/015/007/001/0000

AUTHOR: Vrtel, J. (Engineer; Candidate of sciences); Svoboda, M. (Engineer);
Sicha, F.

ORG: [Vrtel; Svoboda] State Research Institute of Material and Technology, Prague
(Statni vyzkumny ustav materialu a technologie); [Sicha] Klement Gottwald Iron Works
in Vitkovice, Ostrava (Viktovicke zelezarny Klementa Gottwalda)

TITLE: Fine-grained, niobium-alloyed weldable steel

SOURCE: Strojirenstvi, v. 15, no. 7, 1965, 512-520

TOPIC TAGS: steel, niobium steel, solid mechanical property, metal property, welda-
bility, niobium alloy, niobium, 13,032 niobium steel

ABSTRACT: The article reports detailed information on a new fine-grained niobium
alloyed steel recently developed in Czechoslovakia and standardized as No. 13,032.
The article briefly explains the effect of niobium on the mechanical properties of
steel and compares the new steel with existing standard types employed for similar
purposes. This paper was presented by J. Raiman, Engineer. Orig. art. has:
13 figures and 11 tables. [JPRS]

SUB CODE: 11, 15 / SUBM DATE: none / ORIG REF: 009 / OTH REF: 003

Card 1/1

UDC: 669.14.018.29;669.14.018.62;669.293

WHEEL, S.

Heat treatment of electroslag welds. p. 284.

ZVARNENIE. (Ministerstvo hutneho priemyslu a rudnych baní a Ministerstvo strojárstva)
Bratislava, Czechoslovakia. Vol. 8, no. 6, June 1959.

Monthly List of East European Accessions (LEIA) Vol. 9, no. 1, Jan. 1960.

Uncl.

VRTEL, J.

Distr: HE30 2 cys/HE2b(v)/HE3d

Fuel elements, fuel element cladding, and construction materials in a reactor. II. Construction materials. Jaroslav Pluhak and Jaroslav Vrtel (State Research Inst. Materials Technol., Prague). Jaderná energie 5, 331-5 (1959); cf. CA 54, 2026i. — Materials for control rods are discussed. Ag-In-Cd alloy has the advantage (over Cd) of a higher m.p. Hf has the disadvantage of high cost. B and B-steel are widely used despite the danger of deformation by the He produced. B₂C can be used either alone or dispersed in Al ("boral") and can be enriched with B¹⁰.

Dispersion of Gd₂O₃ or Eu₂O₃ in steel is under development. Requirements for special steels for the manuf. of reactor pressure vessels are discussed; problems include embrittlement under radiation and the welding of austenitic steel 100 mm. thick. Materials for other uses, such as heat-exchanger pipes, are also discussed. H. Newcombe

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1-AMR/S
1-RS
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~~JAROSLAV, VRTEL~~

VRTEL, J.

Distr: 4E3c 2 oya/4E2b(v)

19

Material problems of pressure vessels for nuclear reactors. Jaroslav Vrtel (State Research Inst. Materials and Technol., Prague). Jaderud energia 3, 397-404 (1959).—The material for construction of pressure vessels, in order to be safe and not require repairs for 25 yr., must keep its max. mech. properties in all places under repeated mech. stress. The mech. stress is due not only to the pressure difference, but also to the heat produced by steady operation of the reactor, by sudden stopping or starting, and by absorption of radiation in the walls. The use of thin walls decreases the heat stress, but requires high mech. strength. In order to control embrittlement, the transition temp. must be low. The degree of radiation damage depends on neutron flux, neutron energies, time, and temp. Higher temp. promotes recovery. Limit of effective damage is 10^{18} n/sq. cm. The steel should be fine-grained with low tendency toward aging. To decrease induced radioactivity, the Co and Mn content should be low, but if this is impractical, there should be a shield of B steel between the wall and the reactor. II. ~~Material~~

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1-RS
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CAK

1/12

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Z/034/60/000/012/004/015

E073/E535

211310

AUTHOR: Vrtěl, Jaroslav, Engineer
 TITLE: Steels and Cast Irons with High Boron Contents
 PERIODICAL: Hutnické listy, 1960, No.12, pp.945-950

TEXT: Work of various authors, including work presented at the Second International Conference on Peaceful Utilization of Atomic Energy in Geneva, related mainly to overcoming technological difficulties in producing formed ferritic and austenitic steels with as high a boron content as possible and particularly with achieving good malleability of such alloys. Less attention was paid to the study of their structural conditions, which are of interest also outside the field of nuclear engineering. Therefore, the author carried out detailed investigations in 1958 at SVUMT for the purpose of getting to know the structure of boron containing steels and cast irons (Refs. 1,2). The boron for alloying was produced by reducing boron compounds or ferroboration was used for alloying. Speight (Ref.9) investigated the possibility of alloying steel with up to 0.003% B. His results were verified in Czechoslovakia by the tests of Skála and Tlustá (Ref.10) who achieved alloying with boron up to 0.4%. The authors used on the one hand non-aqueous
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85175
Z/034/60/000/012/004/015
E073/E535

Steels and Cast Irons with High Boron Contents

remolten borax and on the other hand boron oxide. The chemical composition of the melt during the reaction is given for a typical case of cast iron in Table 1. The reaction proceeded between 1350 and 1450°C, the weight ratio of the quantity of borax to the quantity of metal was 1:10. After 30 min the boron content was 0.17%, after 60 min it was 1.46%. The time dependence of saturation of the metal with boron during reduction of boron compounds is graphed in Fig.1 for steel with 0.07 and 0.19% C and for cast iron with 3.75 and 1.90% C, both in the case of using borax and in using B_2O_3 for the reaction. For obtaining higher boron contents, ferroboron was mainly used, as a result of which boron contents of up to 5.54% were achieved. The thus produced materials were investigated to determine their mechanical properties, structural composition and the influence of heat treatment. Particular attention was paid to studying the phase compositions of such cast irons and steels. In the cast irons the boron enters into the cementite or forms the carbide $Fe_{23}(C,B)_6$; depending on the B:C ratio in steel the stable boride Fe_2B occurs and the authors did not succeed to dissolve it in the α -iron. As a result of this, the

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Z/034/60/000/012/004/015
E073/E535

Steels and Cast Irons with High Boron Contents

improvement of the properties of steel and cast iron with over 1% B by heat treatment is very limited. The influence of the heat treatment is practically limited to globularizing the boride Fe_2B of the borite eutectic. The properties of the Fe-B alloys are determined by the chemical composition and particularly by the casting temperature and the speed of cooling etc. which influence the process of crystallization. In boron steels not containing other elements, the isolate consisted of Fe_2B ; if a strong carbide forming element, for instance Ti, was added, the appropriate carbide could be detected in addition to Fe_2B . Additions of Cr and Al (up to 5.8% Cr and 3.5% Al) did not bring about the formation of a new phase; the Cr entered into the Fe_2B lattice increasing its lattice parameter, whilst Al up to 3.5% is dissolved in the basic ferritic mass. As regards the influence of heat treatment, extensive tests have shown that the properties of boron containing steels cannot be decisively influenced by quenching and tempering, even if additions are chosen which increase considerably the hardenability (Cr for instance). There are 11 Figures, 5 tables and 16 references: 6 Czech, 3 German, 7 English.

ASSOCIATION: SVÚMT, Praha (SVÚMT, Prague)
SUBMITTED: August 12, 1960
Card 3/3

VRTEL, Jaroslav, inz. CSc.; RYSAVA, Marie, CSc.

Contribution to the study of secondary hardening of boiler steel with addition of molybdenum (Czechoslovak Standard 15 223). Hut listy 20 no.1:31-36 Ja '65.

1. State Research Institute of Materials and Technology, Prague.

VRTEL, J.

VRTEL, J. Effect of nitrogen on the quality of welded joints. p. 16.

Vol. 3, No. 1/2, 1954

SVAROVSKY SBORNÍK

TECHNOLGY

Bratislava, Czechoslovakia

So: East European Accessions, Vol. 5, No. 5, May 1956

VRTEL, J.

Radioisotopes for controlling welded seams on pipelines. p. 760.
STROJIRENSTVI. Vol. 4, no. 10, Oct. 1954.

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 5, No. 6, June 1956 Uncl.

CZ/38-60-1-5/24

AUTHOR: Vrtěl, Jaroslav
 TITLE: Materials for Reactor Control Devices
 PERIODICAL: Jaderná Energie, 1960, No. 1, pp. 9 - 15

TEXT: The author analyzes the qualities of materials used in the production of reactor control devices, regarding their effectiveness for this purpose. He specializes on various types of rods, such as control rods, compensator rods and emergency rods, which are designed to control and change the output of nuclear reactors and maintain the chain reaction. He also deals with the requirements these materials must meet and with the most important absorption materials, such as hafnium, rare earth elements, cadmium and boron. There are 15 diagrams, 4 tables, 9 photos and 10 references, 8 of which are American, 1 British and 1 Czechoslovakian.

ASSOCIATION: Státní výzkumný ústav materiálů a technologie, Praha (State
Experimental Institute for Materials and Technology, Prague)

Card 1/1

S/137/62/000/011/032/045
A006/A101

AUTHOR: Vrtěl, Jaroslav

TITLE: Steels and cast-irons containing over 1% boron for protecting and regulating purposes

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 88, abstract 111591 ("Material sb. SVUMT, 1959", Praha, 1960, 115 - 164, Czech; summaries in Russian, German and English)

TEXT: The author analyzed various methods of alloying steels and cast-irons with boron, in particular, by reduction of boron compounds or introducing Fe-B. The technical conditions are determined for the production of cast and forged steel, containing up to 5% B, and the physical and mechanical properties of steel at room and high temperatures are given, depending upon the B content. It was established that the mechanical properties of steel containing 2.5% B and 0.1% C can not be improved by heat treatment. The author presents the optimum chemical composition and heat treatment conditions of steel used for the casting of heat protection units for reactors. ✓

V. Srednogorska

[Abstracter's note: Complete translation]
Card 1/1

S/137/62/000/011/029/045
A006/A101

AUTHORS: Svoboda, Miroslav, Vrtěl, Jaroslav, Šícha, František

TITLE: Low-alloy weldable ferrite-perlitic steel with high toughness

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 74
abstract 111479P, Czechoslovakian Patent no. 101219 of October 15, 1961)

TEXT: The composition is given for a steel grade with high a_k at temperatures to -100°C in delivery state which is suitable for the manufacture of large-size parts. The steel contains in %: C 0.10 - 0.25, Ni 0.3 - 1.0 Al (in the solid solution) 0.02 - 0.20 Si \leq 0.4, Mn 0.8 - 1.5. The steel may also contain carbide-forming elements, such as: Nb, Ta, Mo, V, Ti and Zr, separately or in combinations, up to 0.4%. Steel containing (in%) C 0.11 Mn 0.94 Si 0.28 Ni 0.65 Al (in the solid solution) 0.1 Nb 0.09 shows at -70°C a_k as high as 6 kgm/cm². The temperature of transition to brittle state is -100°C in delivery state, and -70°C after deformation aging.

M. Shapiro

[Abstracter's note: Complete translation]

Card 1/1

41987
Z/506/60/000/000/003/004
I037/I237

212400

AUTHOR: Vrtěšl, Jaroslav, Engineer, Candidate for Technical Sciences

TITLE: Steels containing Boron for nuclear technique

SOURCE: Prague. Statni vyzkumny ustav materialu a technologie. Materialovy sbornik, 1959. Prague, 1960, 115-164

TEXT: Results of experiments with steels and cast irons containing 1-5% Boron are reported. These steels are required for shielding and control purposes in nuclear reactors, especially where Cd¹¹³ cannot be used, as B has a large cross section for thermal neutrons. Another use of the B - steels is for heat screening between the active zone and the external coat. For the latter use high corrosion resistance and stability is required. The B - steels can be prepared a) Up to 1.5% B by reduction of B - compounds by aluminium, the reduced B being incorporated into the alloy. b) Up to 5% B by addition of ferrobor. The wrought steels without further additions have mechanical proper-

Card 1/4

Z/506/60/000/000/003/004
I037/I237

Steels containing Boron...

ties, especially ductility and construction, superior to those achieved by Middleham. Addition of chromium improved strength but reduced ductility. However it considerably improved the mechanical properties at 300°C.

The notch-bar test of toughness of steels containing more than 1% B yields low values (also due to the presence of Al in the alloy). The decrease in toughness depends also on the carbon content. Increase in carbon content enhances the effect of Al on decreasing the toughness. In any case, the Al content should be kept below 3.5%.

In steels containing more than 2.5% B and more than 0.1% C no transformation occurs that would substantially improve the mechanical properties of the steel. It is advantageous to heat treat the boron containing steel castings at 920°C - 950°C for one hour and to anneal them at 680°C for 10 hours. This procedure improves the homogeneity of the steel.

Card 2/4

2/506/60/000/000/003/004
1037/1237

Steels containing Boron...

Metallographic, chemical and X-ray studies, as well as thermal analysis on steels with varying B content show that the present borides do not affect the metallic matrix. The properties of the B - steels are determined by the chemical composition and by technological factors (casting temperature, cooling rate affecting the crystal size). Carbon enters into reaction with B and Fe forming complex Ferro-Boro-carbides of the type $Fe_{23}(C,B)_6$ which accompany iron borides alloyed with Al and Cr. Al and Cr also take part in alloying of solid solution of α iron (at low carbon content). Thus chromium fulfills a multiple function. It improves the mechanical properties of B - steels at elevated temperatures, it stabilizes the Boron containing components, and increases the steel resistance towards atmospheric corrosion. 3%-3.5% proved to be the optimal chromium content. Consequently, the steel for heat protection of reactors had the following composition: C 0.1%, B = 2.0 2.5%, Al = 2.0-2.5%, Cr = 3.0 3.5%, Ti = 1-1.2%.

Card 3/4

Z/506/60/000/000/003/004
I037/I237

Steels containing Boron...

Titanium (sometimes tungsten) was added for C and N binding to avoid Borocarbide and Boronitride formation. Si is also frequently in amounts of between 1% and 5%. It improves stability and hardness as well.

The complex phenomenon occurring in the steel at 500-700°C should be further investigated. The radiation effect on the different types of B-steel also required further consideration. There are 36 figures, 19 tables and 25 references. English language references include: Middleham, T.H., Ruit, S.R., Colbeck, E.W.: J. Brit. Nucl. En. Conf. 3 (1958) 116-124; J. Iron & Steel Inst. 184 (1957) 1-14; Iron & Steel 30 (1957) 526-534. Goldhoff, R.M., Spretnak, J.W.: Distribution of B in gamma Iron Grans.: Transact. AIME 209 (1957), 1278-83.

Card 4/4

[illegible]

2 f

ACCESSION NR: AP5019910

05/0032/64/014/012/0975 071

AUTHOR: Vrtel, J. (Engineer, Candidate of sciences)

TITLE: Micromechanism of brittle fracture of steel machine parts

SOURCE: Strojirenistvi, v. 14, no. 12, 1964, 929-936

INDEX TERMS: metal brittleness, metal fracture, metal deformation, steel, mechanical engineering

Abstract (Author's English summary, modified): The article presents a comprehensive survey of theories explaining the mechanism of deformations and displacements in the structure of metals, occurring there on an atomic scale. The micromechanism of brittle fracture is an important factor because it initiates macroscopic cracks which may eventually cause failures of large machine parts and entire structures. Though the problems of brittle fracture are foregrounded in many research institutes, the vital stage of the process, that is, the initiation of the microscopic cracks, is not clear. In this respect the theories discussed in the article have a common weak point. The article contains 4 formulas, 11 graphs, and 3 tables.

"APPROVED FOR RELEASE: 09/01/2001" CIA-RDP86-00513R001961220003-7

ACCESSION NR: AP5019910

ASSOCIATION: SVUMT, Prague

SUBMITTED: 00

NO REF SOV: ONA

ENCL: 00

OTHER: 016

SUB CODE: IE, AS

JPRS

C-1 2/2 2003

L 3764-66 EWA(d)/EWP(t)/EWP(z)/EWP(B)

CZ/0034/65/000/001/0031/0036

ACC NR: AP5027863

AUTHOR: Vrtel, Jaroslav (Engineer, Candidate of sciences); Rysava, Marie (Candidate of sciences)

TITLE: Contribution to the study of secondary precipitation hardening of molybdenum containing boiler plate steel CSN 15223

SOURCE: Hutnicke listy, no. 1, 1965, 31-36

TOPIC TAGS: steel, precipitation hardening, molybdenum steel, electron microscopy, fabricated structural metal, toughness/CSN 15223 steel

ABSTRACT: [Authors' English summary]: CSN steel 15223 containing Mn and Mo has the same composition as U.S. steel A 302 B; electron microscopy technique was used in investigating factors that cause low notch toughness of thick plates made of this steel. It was found that hardening occurs in the steel during tempering, and is due to the precipitation of Mo_2C carbide. Maximum hardening with considerable reduction in notch toughness appears at 600°C after 14 hours of tempering. Details of the microscopic examination of Mo_2C are presented, and the extent of its precipitation during heat treatment is discussed. Orig. art. has: 4 tables, 4 graphs, 14 figures.

Card 1/2

L 3764-66

ACC NR: AP5027863

ASSOCIATION: SVUMT, Prague
55

SUBMITTED: 00

NR REF SOV: 001

ENCL: 00

OTHER: 008

SUB CODE: MM, IE

JPRS

SC
Card 2/2

CZECHOSLOVAKIA

KUDLAC, E.; VRTEL, M.; Veterinary Faculty, Chair of Gynecology,
College of Agriculture (VSZ, Veterinarni Fakulta, Katedra Porod-
nicko-gynekologicka), Brno.

"Comparative Study of the Caesarian Section in Cattle Carried out
on Standing and Lying Animals from the Left Side."

Prague, Veterinarni Medicina, Vol 11, No 7, Jul 66, pp 420 - 430

Abstract [Authors' English summary modified]: Evaluation of 389
Caesarian sections is made; the method of paramedial section was
used on 250 lying animals, and the section in the left flank on
139 standing animals. The main indications for the Caesarian sec-
tion were narrow delivery canals, large fetus, and inadequately
opened cervix uteri. Better results from the surgical stand point were
obtained in operations in the standing position. The viability of
the calves is a function of the time elapsed between the onset of
the delivery and the operation. 194 cows were used in further
breeding; 68.56% were fertile. 4 Tables, 20 Western, 5 Czech, 1
East German reference. (Manuscript received 11 Feb 66).
1/1

43543
S/196/62/000/022/007/007
E194/E155

9.2/20

AUTHORS: Hanus, Jan, and Vrtel, Leo
TITLE: Cascade current transformer
PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika,
no.22, 1962, 28-29, abstract 22 I 149 P. (Czech. pat.
cl. 21d2, 53/01, no.99246, April 15, 1961)
TEXT: The bushing-type current transformer, the construction
of which is patented, withstands short-circuit currents very well.
It is a two-stage cascade. The construction is similar to that of
a pedestal-type current transformer, which is simpler, because in
it the short-circuit current passes only through the primary
winding of the first stage, whereas in that under consideration
the current must also pass through the second stage. Only the
second stage is insulated for high voltage. The first stage has
low-voltage insulation, so that its core (made of toroidal strip)
has a very short mean magnetic path length and consequently low
magnetising ampere turns. For a given accuracy this makes it
possible to use a small rated number of ampere-turns in the first
stage. The primary winding (2) and the secondary winding (3) of
Card 1/5

Cascade current transformer;

S/196/62/000/022/007/007
E194/E155

the first stage (see sketch) are uniformly distributed over the first core. The small number of uniformly-distributed circular turns and the small dimensions of the core give the first stage rigidity against short-circuit currents. The second stage has two primary windings (5), (6) and secondary winding (7). Its core (4) may be toroidal, or even rectangular of core or shell-type. The primary winding (5) is a continuation of winding (2) of the first stage, and short-circuit current also passes through it. For rigidity, it should have the least possible number of turns, preferably one. The conductor section of windings (2) and (5) should be designed to ensure thermal stability. A further second stage primary winding (6) is connected to the second winding of the first stage (3). The considerable burden which the second stage represents, and also the small section of the primary stage core, causes this core to saturate when the current is heavy. Therefore, the current in windings (3), (6) and (7) is considerably less than in windings (2) and (5) (it does not exceed 50 times the rated current). The section of conductors for windings (3), (6) and (7) should be selected accordingly. Windings (5) and (6) should be

Card 2/5

Cascade current transformer

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wound in such a way that within the core currents in them are in the same direction. The number of turns in winding (7) is based on the condition

$$I_2 N_2 = I_1 N_1 + I_1^1 N_1^1 \quad \text{where } I_1, I_1^1 \text{ and } I_2 \text{ are}$$

the currents in windings 5, 6 and 7, and N_1, N_1^1 and N_2 are the number of turns in these windings. Since windings 5, 6 and 7 need only normal rigidity against short-circuit currents, the second stage may consist of ordinary bushing-type current transformers with porcelain insulators (with somewhat modified winding data). To these current transformers is fitted a first stage the data of which depend on the rated current, the rigidity class and the short-circuit current. Possible variants are: 1) winding (5) may have one or several turns; 2) the first stage may be made as an auto-transformer with a transformation ratio of 1:1; 3) to reduce the error, the first stage may be made with pre-magnetisation - the first stage core is divided into two unequal parts, the smaller having a premagnetising winding supplied from the terminals of an impedance connected in series with winding (6);

Card 3/5

Cascade current transformer.

S/196/62/000/022/007/007
E194/E155

4) if the second stage core is of the shell type it is not uniformly magnetised because winding (5) passes through only one of the two windows of the core; to avoid this an equalising winding is wound on the adjacent part of the core and connected in series with winding (7); the number of turns in this equalising winding, N_2^1 , is selected according to the condition $I_1 = I_2 N_2^1$ (supposing that winding (5) has one turn). The advantages of the construction are: high rigidity; no need for ferro-nickel alloys as in single-stage construction; the possibility of using standard multi-turn bushing transformers for the main part of the current transformer.

[Abstractor's note: Complete translation.]

Card 4/5

VRTELI, Gr., candidat in stiinta economice

Expanded reproduction of skilled labor. Probleme econ 16
no.7:14-25 J1 '63.

SVEDIROHOVA, Milada; TRKAN, Miroslav; VRTELOVA, Hana

Selecting and testing most suitable varieties of brewing
barley in Czechoslovakia. Kvasny prum 9 no.5:122-124 My '63.

1. Vyzkumny ustav pivovarsky a sladarsky, Praha, pracoviste
Brno.

CZECHOSLOVAKIA

POPLUHAR, L.; VRTIAK, J.; Chair of Infectious Diseases, Veterinary Faculty, College of Agriculture (VSP, Vetr. Fakulta, Katedra Infekcnich Chorob), Kosice.

"Latent Forms of Tuberculosis and Anergic Animals as a Source of Tuberculous Infection in Cattle."

Prague, Veterinarni Medicina, Vol 11, No 8, Aug 66, pp 523 - 528

Abstract [Authors' English summary modified]: Reexamination of 517 head of cattle originating from tuberculous environment was carried out; in 141 animals anergic conditions were found after a dose of 500, 5000, and 10000 TU. In 2 of these animals generalized form of tuberculosis was found by dissection, and in 3 calcified tuberculous changes were found. 96 other samples were taken; in 2 tuberculous organisms were found by cultivation, and in 4 by biological tests. The tuberculin test in cattle is highly reliable, but does not exclude the possibility of keeping a tuberculous animal in the herd; this may cause a new outbreak of tuberculosis. 1 Table, 15 Western, 4 Czech, 1 Russian, 1 Indian, 1 Hungarian, 1 Polish reference. (Manuscript received 10 May 65).
1/1

- 86 -

VRTILEK, VLADIMIR

[illegible]

30

1. "Organoids of Life," 2nd ed. 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
2. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
3. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
4. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
5. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
6. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
7. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
8. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
9. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
10. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
11. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)
12. "The Cell," 1950, 236p. "A study of the structure and function of the living cell." (London: George Allen and Unwin, 1950.)

VRTFIKA, V.

"Once Again About the Lunak", P. 616, (VRIDLA VLASTI, Vol. 2, No. 26,
December 1953, Praha, Czech.)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3,
March 1955, Uncl.

VRTMKA, V.

"Some Information about National Skiing Competitions," P. 616, (Czechoslovakia)
VIACI, Vol. 2, No. 26, December 1953, Praha, (Czech.)

SC: Monthly List of East European Accessions (EEAI), LC, Vol. 4, No. 3,
March 1955, Uncl.

POSPISIL, R.; POLONY, R.; MITTERMAYER, T.; VERTIAK, J.; za technickej
spoluprace M.Cechlovskej.

Neorickettsiosis as a new anthroponosis and its relation to
bronchopneumonia in calves. Cesk.epidem.mikrob.imun.10 no.2:
98-101 Mr '61.

1. Ustav hygieny lek.fak.Univ.P.J.Safarika v Kosiciach; Statny
ved.veterinarny ustav v Kosiciach; Infekcne odd. KUNZ v Kosiciach;
Klinika pre choroby infekcne vet.fak. v Kosiciach.
(BRONCHOPNEUMONIA veterinary)
(MIYAGAWANELLA infect)

Veterinary Medicine

CZECHOSLOVAKIA

GDOVINOVA, A.; POLONY, R.; VRTIAK, J.; ZAVADOVA, J.; Department of Infectious Diseases, Veterinary Faculty, College of Agriculture (VSP, Veterinarska Fakulta, Katedra Infekcnych Chorob), Kosice.

"Use of the Color Test in Laboratory Diagnosis of the Classical Fowl Plague."

Prague, Veterinarni Medicina, Vol 12, No 1, Jan 67, pp 19 - 25

Abstract [Authors' English summary modified]: The optimum cell concentration with the highest activity during a 4-7 day observation period was $1-2 \times 10^6$ of chicken embryonal cells. Best results were obtained in Earl's medium. Most distinctive color changes were obtained with a 10% concentration of the serum. A comparison of the results of the color test with titration in the stationary KEB test tube cultures showed practically the same values by both methods. The differences were within a single order of magnitude. 2 Tables, 8 Western, 5 Czech references. (Manuscript received 2 Jul 66).

VRTIAK, ZAPLETAL

SLOVAKIA(CZECH?)/Microbiology - Medical and Veterinary
Microbiology

F-4

Abs Jour : Referat Zhurn - Biol., No 16, 25 Aug 1957, 68665

Author : Vrtiak, Zapletal

Inst :

Title : Trichophyton faviforme discoides-- Producer of Ringworm
in Large Horned Cattle.

Orig Pub : Veterin. Casop., 1956, 5, No 3, 204-228

Abstract : No abstract.

Card 1/1

- 80 -

SEDLACKOVA, E.; VRTICKA, K.

Speech development in children with congenital defects of the
palate. Cesk. pediat. 19 no.3:239-242 Mr'64

1. Foniaticka laborator fakulty vseobecneho lekarstvi KU v
Praze; reditel: prof.dr. M.Seeman, DrSc.

X

VRTICKA, Karel

Perichondritis with consecutive necrosis of the cartilage as a late sequel of radiation injury of the larynx. Cesk.otolar. 9 no.2:120-122 '60.

1. Otolaryngologicka klinika VLA v Hradci Kralove, prednosta prof.dr. Jan Hybasek.

(RADIATION INJURY)

(LARYNGEAL CARTILAGE pathol.)

(LARYNX radiation eff.)

KLOBEC, K., Plk., MUDr.; KOVAR, M., mjr., MUDr.; RUZNAR, St., kpt., MUDr.;
VRTILEK, M., kpt., MUDr.

Various data on so called sinobronchitis. Cas. lek. česk. 95 no.
37:1008-1015 14 Sept 56.

1. Posadkova nemocnice Olomouc.
 (SINUSITIS, compl.
 bronchial dis., statist. (Cz))
 (BRONCHI, dis.
 with sinusitis, statist. (Cz))

VRTILEK, VLADIMIR

Reaction of serum based on its coagulation by sulfo-salicylic acid. II. Healthy persons. Vladimir Morávek and Vladimir Vrtilek. *Průmysl lékař. 1935, 362, No. 4, 1-1935*. Turbidity is produced in dil. serum by an alkali. The different turbidities at different pH values are plotted graphically. The serums of pregnant women show a different shape curve than the serums of normal persons. III. Concentration of serum and influence of ions. Vladimir Morávek, Vladimir Vrtilek, and Iva Morávková. *Ibid.* 17-36. Here, as in the previous article, the turbidity of the serum is measured at different pH values by using 5.5 ml. of soln. consisting of 5 ml. 0.1N HCl, 1 ml. of 5% sulfosalicylic acid soln., and 0.5 ml. of a 0.5% gum arabic soln. To this 0.5 ml. serum is added, and the vol. made up to 16.5 ml. with water. Now 0.1N KOH is added, and the measurements are made after 2 min. KCl, LiCl, and CaCl₂ influence the result by their effect on the final pH. Neutral salts have essentially the same effect as dilg. the serum. IV. Influence of neutral salts and preservation of the serum. *Ibid.* 37-48. LiOH is used for gradual neutralization, using the same procedure as in the previous article. LiCl, KCl, CaCl₂, SrCl₂, and glucose are used alternatively and their effect upon the shape of the curve noted. With increasing pH every addn. of the salt causes the curve to move upwards in its ascending part of the curve. The optimum of turbidity decreases in the order Sr > Ca > K > Li. Sugars have no effect on the position of the curve. Bivalent cations show a higher reactivity than univalent cations and thus aid in distinguishing qualitatively blood serums. Blood serums stored sterile at 2° to 25° for 48 hrs. show no effect. Lyophilization and inactivation interfere with the buffer system of the serum and change the curve in its ascending branch. (1) E. Lebstein

VRTILEK, V.

Effect of hunger and thirst on biosynthesis of cholesterol in mice.
Coll Cz chem 26 no.6:1573-1581 Je '61.

1. Abteilung für allgemeine und klinische Biochemie, Pharmazeutische
Fakultät der Universität, Brno.

(Mice) (Cholesterol)

VRTILEK, Vladimir; SLAMOVA, Ludmila; APPELT, Jiri

Changes in the cholesterol content of the body in mice after
alloxan-induced diabetes. Scr. med. fac. med. Brunensis 36
no.1/2:55-60 '63.

1. Katedra lekarske chemie lekarske fakulty University J.E.
Purkyne v Brne Vedouci prof. dr. Oktavian Wagner Katedra
biochemie a mikrobiologie farmaceuticke fakulty University
Komenskeho v Bratislave Vedouci prof. DrMr. Antonin Jindra.
(ALLOXAN DIABETES) (CHOLESTEROL)

VRTILEK, Vladimir; SAMKOVA, Milada

Modification of the method of Dische-Orlowski for determination of the lactic acid in the blood. Scr. med. fac. med. Brumen. 35 no.1/2: 59-66 '62.

1. Oddeleni vseobecne a klinicke biochemie farmaceuticke fakulty a
Ustav lekarske chemie lekarske fakulty university J.E.Purkyne v Brne
Vedouci prof. dr. O. Wagner.
(LACTATES blood)

VKTILEK V.

VKTILEK V.

Solanaceae: Datura Stramonium. Cas. česk. lek. 63:13 15 July 50
p. 149-50

NAI

GENL 19, 5, Nov. 50

Endocrinology

CZECHOSLOVAKIA

UDC 616.633(:577.15.65)-074

VRTILEK, V.; Department of Medical Chemistry, Medical Faculty,
J.E. Purkyne University (Katedra Lekarske Chemie Lek. Fak. UJEP),
Brno, Head (Vedouci Katedry) Docent Dr J. SLAVIK

"Determination of Estrogens. I. Normal and Pathological Estrogen
Levels in Urine."

Prague, Časopis Lékařů Českyh, Vol 106, No 9, 3 Mar 67, pp
243 - 246

Abstract [Author's English summary modified]: A spectrophotometric
method for the determination of estrogens is described. Accuracy
and reproducibility of the method, and examples of normal and
pathological levels of the estrogens in urine are discussed. 4
Tables, 10 Western, 4 Czech references. (Manuscript received Mar
66).

1/1

SABACKY, Jaroslav; VRTILEK, Vladimír /

Estrogens in childhood and in a case of congenital adrenogenital syndrome. Cesk.pediat.15 no.11:989-997 N° 60.

1. I. detska klinika v Brne, prednosta prof.dr. Brunecky. Ustav klinickych vysetrovacich metod farmac. fakulty v Brne.
(ESTROGENS urine)
(ADRENOGENITAL SYNDROME urine)

VRTILKOVA, V.; KALVODA, R.

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